

**Un**ited  
**SUMMIT**  
**INNOVATION IN EDUCATION**

Innovation Lab

Idea Hatchery

Collaboration Cafe

Saturday

10:00

Welcome and Introductory Panel

11:00

Colorado MESA with Dr. Richard Weir and Next Generation Prosthetics

Sparkfun's Digital Sandbox  
Intro to physical computing and basic programming

12:00

Bringing Innovation into Practice

1:00

Hands-on Learning and Standards Flexibility: Thinking Outside the Box to Succeed Inside the Bubble

Modular Robotics  
Simple Robots Solving the world's biggest problems

2:00

Authentic Learning Through Maker Tasks

3:00

Making Paper Circuits with SparkFun

Dr. Karl Wendt  
ScriBot: build a robot that can draw almost anything

4:00

Education Ignition Talks

Sunday

10:00

Panel on Design Thinking  
Coeylen Barry, Alex Hernandez, Jim Stephens and Sara Blohms

Chris DeKay, RAFT  
Art, Science, Simple Machines, and Standards

11:00

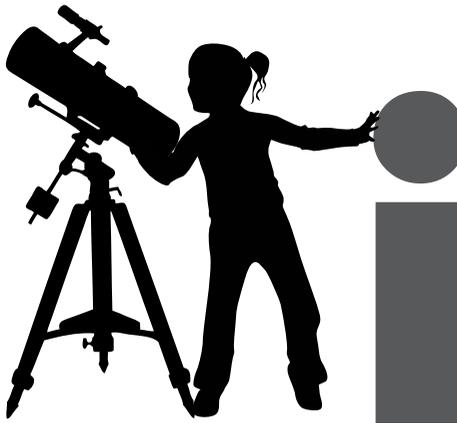
Flipped Learning - Using online video to free up class time for design thinking, problem solving, and inquiry learning

12:00

MODULAR ROBOTICS  
Designing the Future of Education with Thousands of Tiny Robots - Christie Veich

Coeylen Barry and Jim Stephens  
- Hands on Design Thinking Workshop sponsored by:in partnership with:iedsummit.org

1:00



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## Saturday, January 31st

### Welcome and Introductory Panel

#### **10-10:45 am - Innovation Lab**

How to Inspire the Next Generation of Innovators. Why is innovation important? What have we learned? Creativity and STEM education. With thought leaders - Dr. Karl Wendt on Discover Create Advance, Patty Quinones of the Innovation Center in St. Vrain School District, JJ Morrow of Mackintosh Academy and Colorado Association of Gifted and Talented, and Joey Hudy, Intel's youngest intern and White House Mini Maker Faire Alum.

### Colorado MESA with Dr. Richard Weir and next generation prosthetics from University of Colorado Denver, Anschutz Medical Center

#### **11am-11:45 am - Innovation Lab**

How Colorado MESA and the National Prosthetic arm competition is training the next generation of STEM students in the field of bio engineering.

### Sparkfun's Digital Sandbox - Intro to physical computing and basic programming

#### **11am - 12:30pm - Idea Hatchery**

The Digital Sandbox is a learning platform that engages both the software and hardware worlds. It's powered by a microcontroller that can interact with real-world inputs – like light or temperature sensors – while at the same time controlling LEDs, motors, and other outputs. In this 90-minute workshop, familiarize yourself with the basics of programming and work in the Digital Sandbox environment.

### Modular Robotics - Simple Robots Solving the world's biggest problems.

#### **1pm - 2:45 - Idea Hatchery**

Join Modular Robotics' Christie Veitch in this amazing, hands on workshop where you will experiment, building robots to solve problems. It isn't our place to tell you what to teach. However, robots are fun! They help students engage with material in hands on ways. Plus, building robots provides play-driven learning opportunities that explore design, engineering, and emergent behavior in complex systems.

### Bringing Innovation into Practice -- A World Cafe Discussion

#### **12pm-1:30pm - Collaboration Cafe**

It's one thing to come up with great new ideas to transform education - it's entirely another to create effective implementation plans and bring those innovations to the real world! Join International education consultants Michelle Hernandez and Martha Lanaghen for this exciting World-Cafe style workshop to discuss what's worked, and learn from the things that haven't. Be sure to bring a notebook and paper - you'll want to take lots of notes throughout this interactive session.

### Hands-on Learning and Standards Flexibility: Thinking Outside the Box to Succeed Inside the Bubble.

#### **1pm - 1:45pm - Innovation Space**

Nick Haag from RAFT with Matt Vigil, West Middle School; Kate McDonough, Adams 12 Five Star Schools; Stacy Wolff, Flagstaff Academy Charter; and Karol Gates, Colorado Department of Education. This Seminar will look into the incredible versatility of hands-on projects to meet multiple standards and educational goals, and how to utilize that versatility.

## Authentic Learning Through Maker Tasks

### **2pm- 2:45pm - Innovation Space**

Douglas County School District, Learning Services Team

Learning can be much more authentic through maker tasks. This session provides specific examples about how students can drive their own learning and gain real world skills through making, inquiring, tinkering, hacking, and remaking.

## Making Paper Circuits with SparkFun.

### **3pm - 3:45pm - Innovation Space**

Combining conductive materials (copper tape, conductive thread and ink, foil) -- with paper, cardboard, tissue, and other fibers makes learning electronics engaging and accessible. Attend this presentation for inspiration, ideas, and resources you can use to introduce your students to paper-based embedded electronics and computing.

Dr. Karl Wendt - Karl Wendt's ScriBot: build a robot that can draw almost anything.

### **3:00PM - 4:45PM - Idea Hatchery**

Do you want to teach a robot to draw for you? We can help! Introducing Scribot, a robot that you can build and program to draw almost anything. We designed it to include advanced hardware that enables you transform your code into precise drawings. Scribot is being used in schools to teach subjects like programming, systems, and math.

\*\* Free Scribot Kit with attendance.

Education Ignition Talks - Rapid fire talks on a variety of subjects including.

### **4pm-4:45pm - Innovation Space**

Daniel Zahner from Boulder High's Millenium Lab - Creating a school Makerspace. A snapshot of the Millennium Lab at Boulder High School and the challenges of providing 3d printing services to large numbers of students.

Sarah Blohms - STEM Coordinator at Indian Peak's Elementary School - Design Thinking a Process for Innovation.

Axel Reitzig from the Innovation Center in St. Vrain. - His introduction to Robotics and 4 lessons he has learned.

Going global to bring it local. Connecting A(way)2B(e).

Susan Lambert, founder of Away2Be, shares a tale of teens visiting Nicaragua, explaining how educational innovation depends on the power of relationships.

Mekayla Beaver of IDEO and Gloworm and Gia Mediros of Mackintosh Academy and 520 Collective - Make Life: Exploring Making as a Mindset for Life

Making isn't about making products or designing technology but rather a mindset for life. In this short talk we explore what happens when you allow this mindset to catalyze change in your classroom and your life.

## Sunday, February 1st

Panel on Design Thinking - Coeylen Barry, Alex Hernandez, Jim Stephens and Sara Blohms.  
**10am - 10:45am - Innovation Space**

Join this incredible group of Design Thinking professionals and educators as they discuss how they use design thinking in their classrooms and in their lives. They will answer questions including: How has design thinking changed outcomes. Why design thinking is a power tool for education. Room for audience participation.

Chris DeKay RAFT - Art, Science, Simple Machines, and Standards  
**10am - 11:45am - Idea Hatchery**

In this workshop you will learn about the mechanics of simple machines by building moving art that tells a story – a great example of integrating art, science, and engineering. Originally developed by the Exploratorium's PIE Institute, Cardboard Automata are a playful way to learn about simple machine elements such as cranks, cams, levers and linkages while creating art that actually spins and moves through the magic of science. After all of the automata are brought to life, we will spend some time exploring how to use this activity to meet a plethora of standards (from science to math to history).

Flipped Learning – using online video to free up class time for design thinking, problem solving, and inquiry learning.

**11-11:45am - Innovation Space**

Dr. Overmyer is a pioneer in flipped learning. He gives frequent presentations and is the creator of the 25,000 member professional network for flipping education. Flipped learning allows educators to move direct instruction to online videos, and frees up valuable face-to-face time for design thinking, problem solving, and inquiry-based learning. This seminar will show pragmatic ways in which educators can create personalized online videos for students to view and review as needed. Free online tools will be used to allow teachers to easily create and post their own online videos.

MODULAR ROBOTICS - Designing the Future of Education with Thousands of Tiny Robots - Christie Veich.

**12pm-12:45pm - Innovation Space**

Join this discussion on next generation learning, standards and robotics. There are lots of educational tools that are engaging, and there are some that teach real world lessons like design thinking, complexity, systems thinking, perseverance, project-based learning and collaboration. But robotics is unparalleled in combining all of these educational possibilities.

Coeylen Barry and Jim Stephens - Hands on Design Thinking Workshop.  
**12pm-1:30pm - Idea Hatchery**

Design Thinking is a creative process that helps you design meaningful solutions in the classroom, at your school, and in your community. We have worked with schools around the country to successfully implement this process across grade levels and subject areas.

This will be a hands-on experience in Design Thinking followed by a discussion of how it can be used as a powerful tool to transform schools into hotbeds for innovative thinking for teachers and students alike.



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